

The Soundwatch Boater Education Program

Trends in Vessel Traffic with Southern Resident Killer Whales



Southern Resident Killer Whale
Vessel Effects Workshop
National Marine Fisheries Service
March 22, 2004
Seattle, WA

The **Whale** Museum

EDUCATION • RESEARCH



**Promoting stewardship of whales and the
Salish Sea ecosystem through education
and research.**



www.whalemuseum.org

Friday Harbor • San Juan Island • Washington

Small Museum. Big Mission.

Science-based education and stewardship programs...

Community Events

Exhibit Center

Group Tours and Activities

Marine Naturalists Training

Outbreach School Programs

Research Projects/Fellowships

SeaSound Acoustics Project

Marine Mammal Stranding Network

24-hour Whale Sighting & Harassment Hotline

Educational Programs

Gray Whale Project

Museum Website

Orca Adoption Program

Park Interpretive Program

Scholastic Internships

Soundwatch Boater

Education Program

The Whale Museum's Soundwatch Boater Education Program



Program Mission

To promote responsible stewardship of the Salish Sea through the development, distribution, and implementation of best practice guidelines for marine wildlife viewing by residents, visitors and commercial users.

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Program Goal

**To reduce disturbances to marine wildlife
by irresponsible boater behavior.**

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Program Objectives

- **Educate boaters on the best practices for viewing wildlife before they leave the shore.**

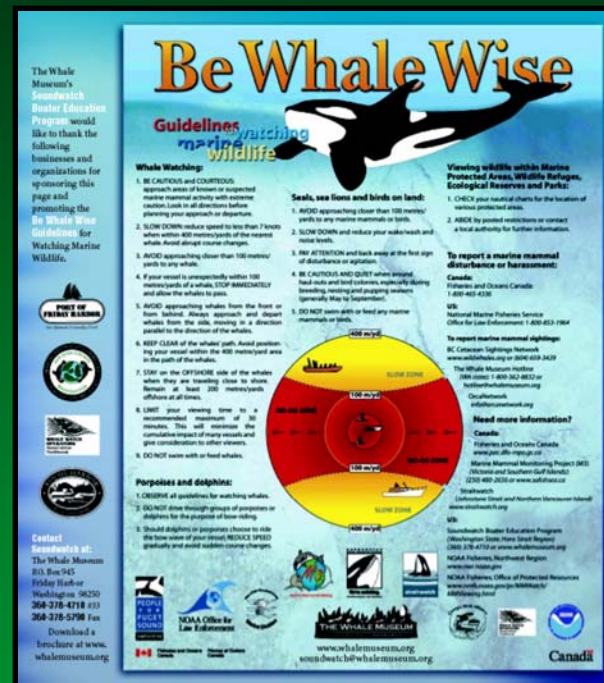
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Program Objectives

- **Reinforce the learning experience in the actual context where disturbances take place.**

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Program Objectives

- Develop and evaluate community-based voluntary guidelines.

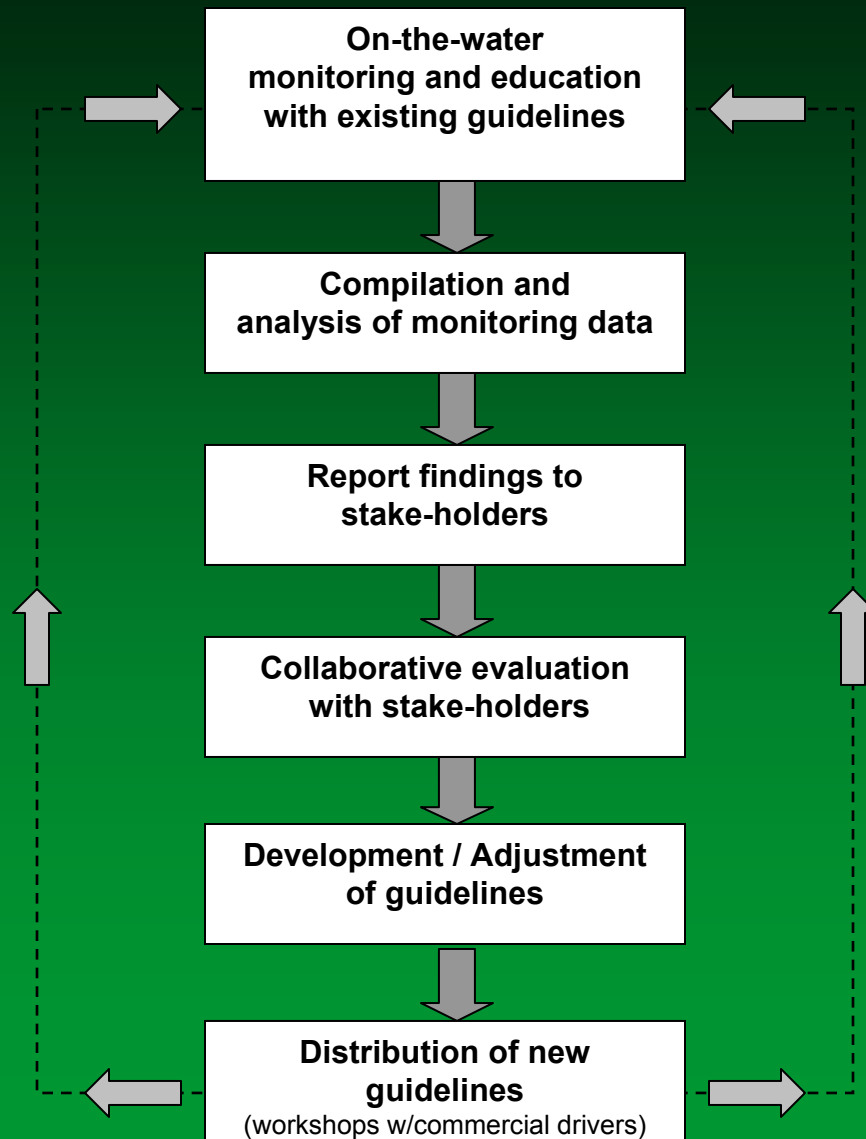
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Program Objectives

- **Provide a scientific platform to monitor vessel activities around marine wildlife.**

Soundwatch Adaptive Management Model



The Whale Museum's Soundwatch Boater Education Program Partnerships

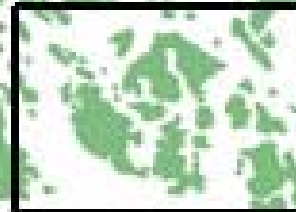
- **Whale Watch Operators Association (WWOANW)**
- **Marine Mammal Monitoring Program (M3)**
- **U.S. and Canadian federal, provincial, state and local governments**
- **Regional NGO's**
- **Science community**
- **Recreational boating/fishing community**
- **Academic institutions**



The International Whale Watch Operators Association Northwest

WWOANW

In 1989 The Whale Museum held it's first ever whale watch workshop. Annual workshops thereafter helped facilitate the formation of the international Whale Watch Operators Association Northwest (WWOANW) in 1994. Since it's inception, the association has annually adopted international voluntary guidelines for commercial boat operators that are more explicit then those outlined by both the U.S. and Canadian Federal governments. Each year new guidelines are adjusted to reflect changing wildlife and human use conditions. The Whale Museum and Soundwatch continue to work with the WWOANW to improve boater behavior, communicate research findings, develop and promote conservation education and to better utilize commercial vessels as research data collection platforms.



Detail

SOUNDWATCH



THE WHALE MUSEUM

**Transboundary
Partnership:**

BE WHALE WISE!



**Northwest Washington state
and southern British Columbia**



Government Partnerships


- U.S. National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- Washington Department of Fish and Wildlife
- Fisheries and Oceans Canada
- San Juan County
- Canadian Islands Trust

Be Whale Wise Guidelines For Watching Marine Wildlife

Download available at:
www.whalemuseum.org

Be Whale Wise

Guidelines for watching marine wildlife



Whale Watching:

1. BE CAUTIOUS and COURTEOUS: approach areas of known or suspected marine mammal activity with extreme caution. Look in all directions before planning your approach or departure.
2. SLOW DOWN: reduce speed to less than 7 knots when within 400 metres/yards of the nearest whale. Avoid abrupt course changes.
3. AVOID approaching closer than 100 metres/yards to any whale.
4. If your vessel is unexpectedly within 100 metres/yards of a whale, STOP IMMEDIATELY and allow the whales to pass.
5. AVOID approaching whales from the front or from behind. Always approach and depart whales from the side, moving in a direction parallel to the direction of the whales.
6. KEEP CLEAR of the whales' path. Avoid positioning your vessel within the 400 metre/yard area in the path of the whales.
7. STAY on the OFFSHORE side of the whales when they are traveling close to shore. Remain at least 200 metres/yards offshore at all times.
8. LIMIT your viewing time to a recommended maximum of 30 minutes. This will minimize the cumulative impact of many vessels and give consideration to other viewers.
9. DO NOT swim with or feed whales.

Seals, sea lions and birds on land:

1. AVOID approaching closer than 100 metres/yards to any marine mammals or birds.
2. SLOW DOWN and reduce your wake/wash and noise levels.
3. PAY ATTENTION and back away at the first sign of disturbance or agitation.
4. BE CAUTIOUS AND QUIET when around haul-outs and bird colonies, especially during breeding, nesting and pupping seasons (generally May to September).
5. DO NOT swim with or feed any marine mammals or birds.

Porpoises and dolphins:

1. OBSERVE all guidelines for watching whales.
2. DO NOT drive through groups of porpoises or dolphins for the purpose of bow-riding.
3. Should dolphins or porpoises choose to ride the bow wave of your vessel, REDUCE SPEED gradually and avoid sudden course changes.

Viewing wildlife within Marine Protected Areas, Wildlife Refuges, Ecological Reserves and Parks:

1. CHECK your nautical charts for the location of various protected areas.
2. ABIDE by posted restrictions or contact a local authority for further information.

To report a marine mammal disturbance or harassment:

Canada:
Fisheries and Oceans Canada:
1-800-465-4336

US:
National Marine Fisheries Service
Office for Law Enforcement: 1-800-853-1964

To report marine mammal sightings:

BC Cetacean Sightings Network
www.wildwhales.org or (604) 659-3429

The Whale Museum Hotline
(WA state): 1-800-562-8832 or
hotline@whalemuseum.org

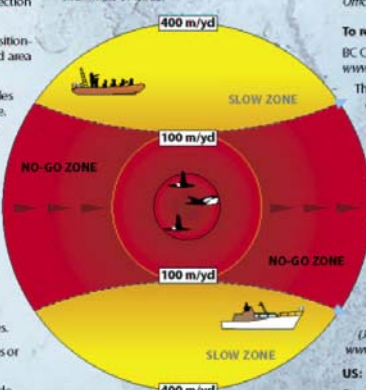

OrcaNetwork
info@orcaneetwork.org

Need more information?

Canada:
Fisheries and Oceans Canada
www.pac.dfo-mpo.gc.ca
Marine Mammal Monitoring Project (M3)
(Victoria and Southern Gulf Islands):
(250) 480-2656 or www.saltshsea.ca

Straitwatch
(Johnstone Strait and Northern Vancouver Island):
www.straitwatch.org

US:
Soundwatch Boater Education Program
(Washington State, Haro Strait Region)
(360) 379-4710 or www.whalemuseum.org
NOAA Fisheries Northwest Region
www.nwr.noaa.gov
NOAA Fisheries, Office of Protected Resources
www.nmfs.noaa.gov/pr/MM/Watch/MMViewing.html

Canada

The Whale Museum's

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Data Collection Methods

Data on vessel and whale activities is collected by Soundwatch crews on the hour and half hour. Monitoring of commercial and private whale watch vessels for compliance to the voluntary WWOANW and Be Whale Wise guidelines and vessel contact information are collected continuously.

All data is recorded using Soundwatch data sheets and then entered into a Microsoft 2000 Access Data Base. Sorts are run using Microsoft Excel to identify distributions of vessel contacts, vessel counts, vessel types and types of activities, as well as vessel compliance with voluntary guidelines.

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Data Collection Methods

- 1. Vessel Counts:** Every half-hour the vessels within a ½ mile radius of where all known whale activity is occurring are counted according to type: commercial whale watching (Canadian or US), private recreational (whale watching or actively fishing), kayak (lumped commercial and private), aircraft (commercial or private), research, shipping traffic or other (as defined in comment section).

The time, date, location, latitude and longitude are recorded. Whale pod (s), direction and basic behavior is also recorded. Vessel counts are also conducted on-shore at Limekiln Whale Research Lab when whales are present and at regular fixed times with or without whales present.

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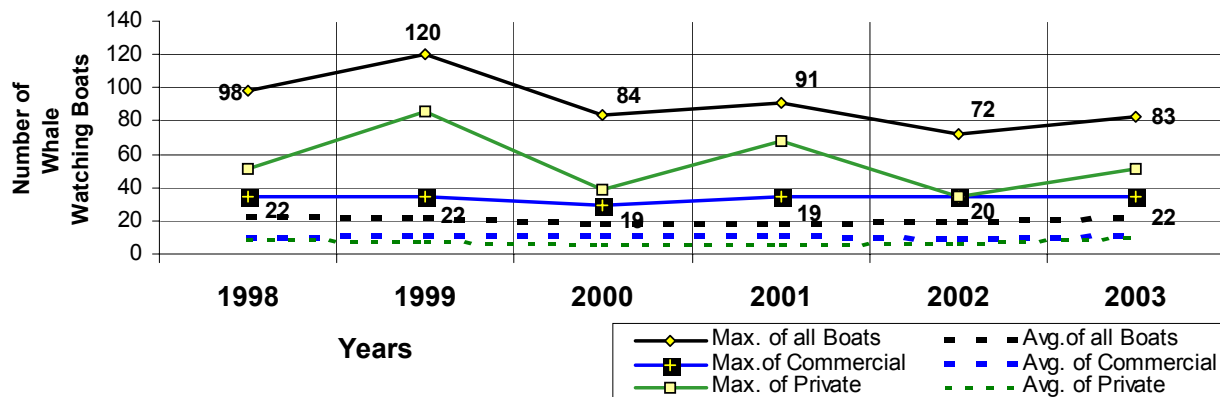
Data Collection Methods

2. Vessel Incidents: An incident is defined as a driver of a commercial whale watch vessel operating contrary to the agreed upon voluntary WWOANW or Be Whale Wise Guidelines, or a private boat operator behaving contrary to Be Whale Wise Guidelines. Incidents are recorded whenever a Soundwatch operator observes an infraction.

A vessel's company and/or name must be identified, preferably the actual name and registration number of the specific vessel. The date, time and exact location are recorded as well as the type of incident(s).

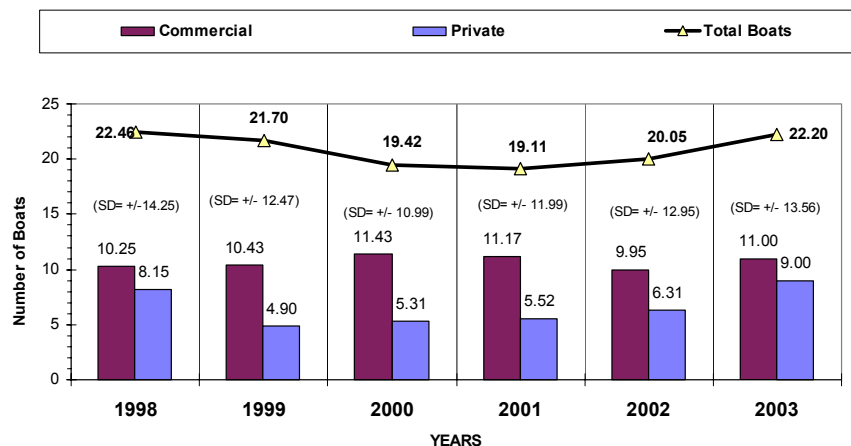
Average and Maximum Number of Vessels in the Vicinity of S.R.K.W.s.

Average and Maximum Numbers of Vessels Accompanying Orcas in the Boundary Waters (1998-2003) (© 2003, The Whale Museum)

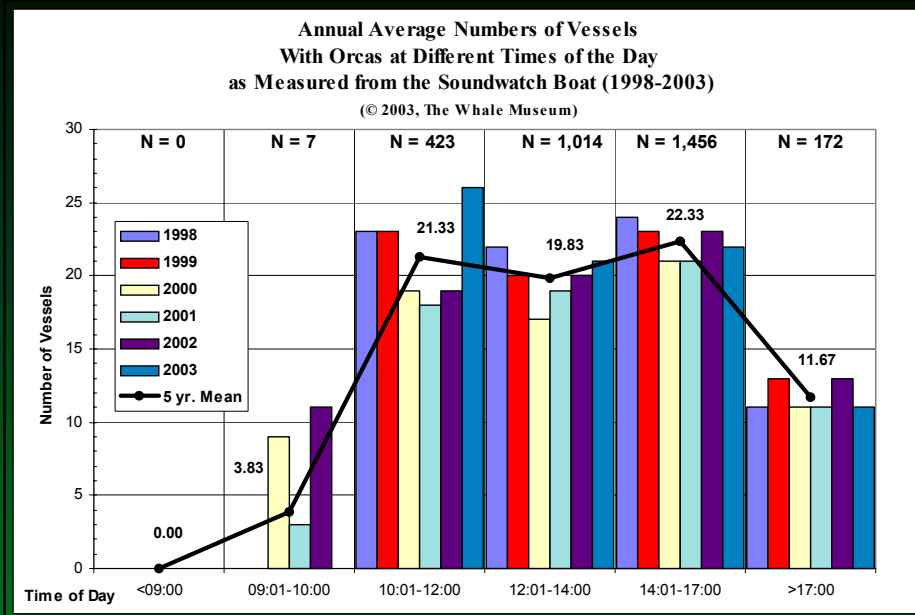


Private vs. Commercial Vessels in the Vicinity of S.R.K.W.s.

Average Number of Boats With Whales in Haro Strait Region (May - September, 1998-2003) (© 2003, The Whale Museum)



Number of Vessels in the Vicinity of S.R.K.W.s. by Time of Day

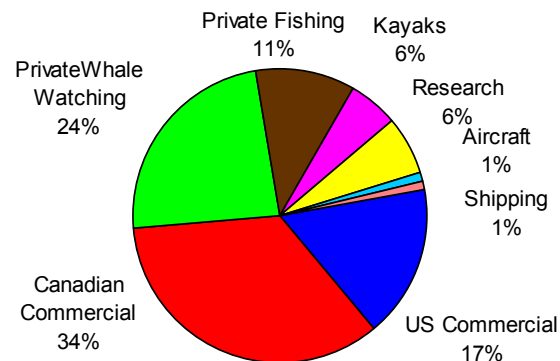


Vessel Types in the Vicinity of S.R.K.W.s.

Distribution of Vessels When Whales are Present

June-September 2003

(© 2003, The Whale Museum)



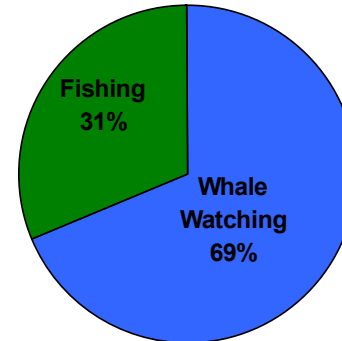
In 2003 there was an average of 22 boats accompanying whales

Private Vessel Activity in the Vicinity of S.R.K.W.s.

U.S. and Canadian Commercial Vessels in the Vicinity of S.R.K.W.s.

**2003 Distribution of Private Boats
When Whales are Present**

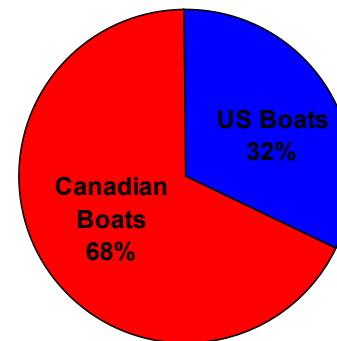
(© 2003, The Whale Museum)



In 2003 private boats made up 35% of boats accompanying whales

**2003 Distribution of Commercial Whale Watching
Boats When Whales are Present**

(© 2003, The Whale Museum)

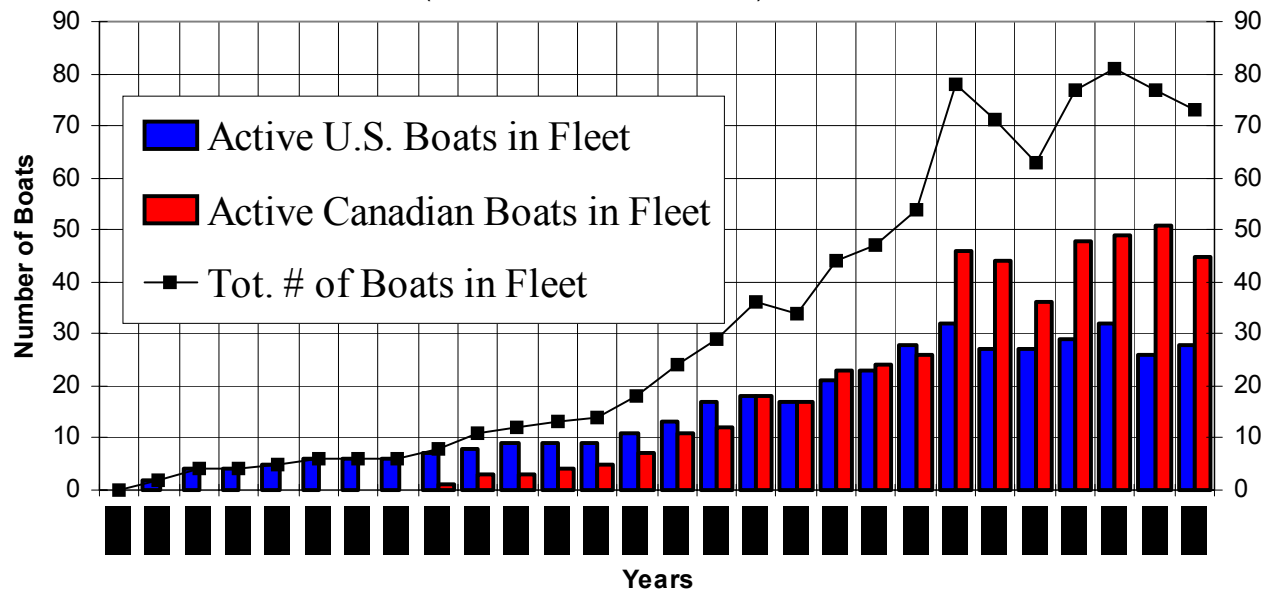


In 2003 commercial boats made up 51% of boats accompanying whales

U.S. and Canadian Commercial Whale Watch Industry Growth 1976-2003

Growth of Commercial Whale Watching in the Boundary Waters of Haro Strait (1976-2003)

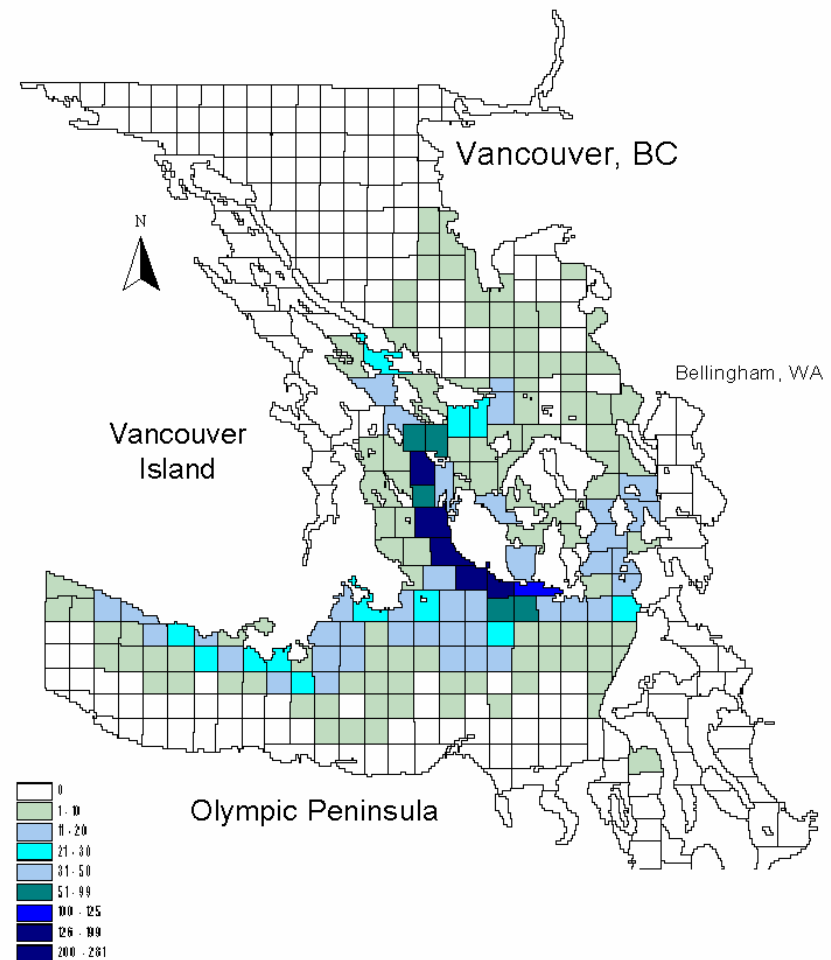
(© 2003, The Whale Museum)



**Spatial density of
where S.R.K.W.s
were followed by
whale watching
boats 1996-2000.**

(GIS plot of Commercial
Whale Watch Spotting
Network Data, Jean Olson,
The Whale Museum © 2000)

**Southern Resident Days/Quadrant
May-September 1996-2000**

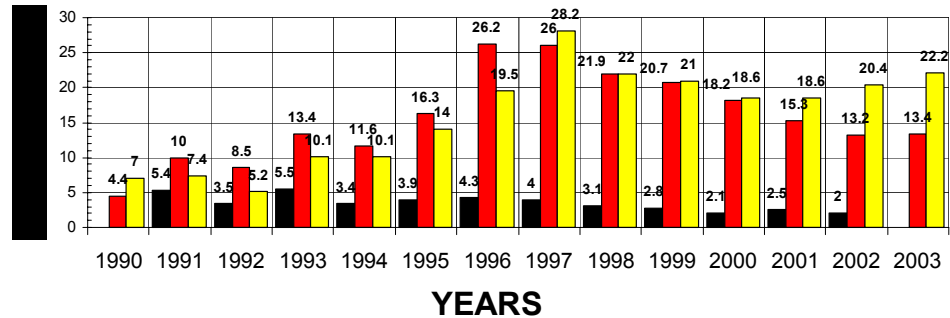


Average Numbers of Vessels With or Without S.R.K.W.s.

Average Number of Boats with/without Whales (1990-2003)

(Lime Kiln = May-August; Soundwatch = April- September)

(© 2003, The Whale Museum)



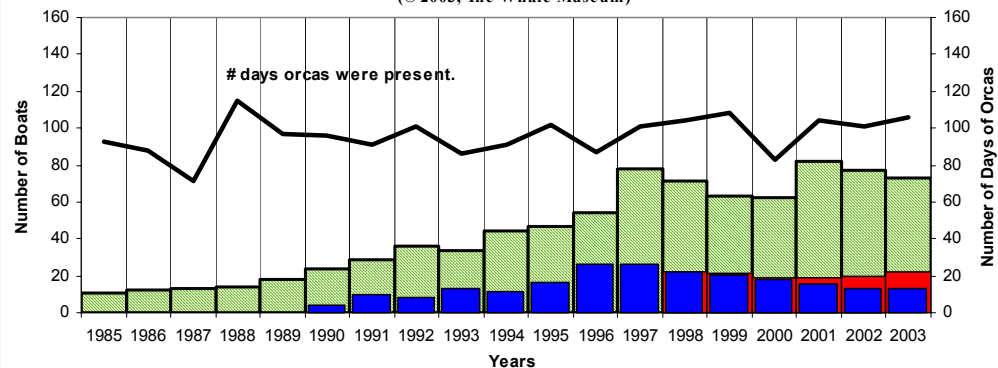
- Lime Kiln Without Orcas (R. Otis)
- Lime Kiln With Orcas (R. Otis)
- With Orcas All Other Areas (Soundwatch)

Whale Watch Vessel Trends in the Vicinity of S.R.K.W.s.

Trends in the Levels of Whale Watching and the Presence of Orcas in Haro Strait

(May-August, 1985-2003)

(© 2003, The Whale Museum)



- No. of "Active" Commercial Whale Watch Boats
- Mean # Boats w/orcas in SW Study Area (1998-03)
- Mean # Boats w/orcas @ Lime Kiln State Park (1990-03)
- # of Days Orcas were in Haro Strait

Vessel Incidents Contrary To Voluntary Guidelines

Soundwatch Observed Commercial, Private, Kayak, Aircraft and Research Behavior Contrary to Guidelines 1998-2003							
Behavior Code	Behavior Category	Incidents					
		1998	1999	2000	2001	2002	2003
1	Leapfrogging	37%	31%	23%	1%	NA	NA
2	Under power within 100 yards of whales	6%	4%	5%	4%	5%	12%
3	Within 440 yards of SJI No-Boat Zone	39%	26%	17%	17%	7%	13%
4	Within 880 yards of Lime Kiln	2%	2%	2%	1%	2%	5%
5	Crossing path of whales	4%	3%	5%	2%	4%	7%
6	Chasing/pursuing whales	3%	1%	3%	2%	<1%	4%
7	Inshore of whales	5%	29%	24%	25%	19%	16%
8	Airplane within 1000 feet	4%	2%	4%	7%	14%	6%
9	Within 200 yards of National Wildlife Refuge	0%	1%	3%	1%	2%	2%
•10	Other		1%	3%	3%	14%	5%
•11	Within 220 yards of shore; whales present			4%	4%	2%	<1%
•12	Repositioning within 100 yards			7%	7%	NA	NA
•13	Parked in the path of whales				26%	24%	17%
•16	Fast within 1/4 mile					3%	4%
•17	1st Approach head on, behind, or on shore					4%	2%
•18	Kayaks spread out					<1%	3%
•19	Kayaks with whales outside 1/4 SJI Zone					<1%	1%
•20	Kayaks paddling w/in 100 yds						3%
•Category Not Used	*1998-2001 Sw Ave 7days/week May-Sept						
During All Years	**2002 SW Ave 3 days/week May-Sept						
	***2003 SW Ave 5days/week June-Sept						
	Total %	100%	100%	100%	100%	100%	100%
	Total Observed Incidents	*398	*791	*653	*533	**259	***373
	Estimated Observation Hours	426hr	510hr	462hr	486hr	378hr	312hr

What Next?

